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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: ALLEN, et al.

Serial No.: 10/596561 Group Art Unit No.: 1625

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For: PYRAZOLO [3.4-B] PYRIDINE COMPOUNDS, AND THEIR USE AS

PHOSPHODIESTRERASE INHIBITORS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## RESPONSE TO RESTRICTION REQUIREMENT

This paper is in response to the Restriction Requirement mailed 13 September 2006, having a shortened statutory period for reply of 1 month. Claims 1-6, 9 and 10 are pending in the application. Claims 1-6, 9 and 10 are subject to a restriction requirement and/or election requirement. Applicants desire to reply as follows.

Restriction to one of the following is required under 35 U.S.C. §121 and 372:

Group I. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being C-R<sup>6B</sup>, E being C-R<sup>6F</sup>, F being C-R<sup>6F</sup>; classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group II. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (X), A being nitrogen or N<sup>2</sup>-07, B being C-R<sup>69</sup>, D being C-R<sup>69</sup>, E being C-R<sup>69</sup>, E being C-R<sup>69</sup>, E being C-R<sup>69</sup>, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group III. Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (x), A being nitrogen or N'-0', B being C-R<sup>60</sup>, D being C-R<sup>60</sup>, E being C-R<sup>60</sup>, F being C-R<sup>60</sup>, et sasified in class 546, subclass various. If this group is elected, a

further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group IV. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being nitrogen or N<sup>\*</sup>-0', E being C-R<sup>6B</sup>, F being C-R<sup>6F</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group V. Claims 73 -123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x). A being A being C-R<sup>60</sup>, Being C-R<sup>60</sup>, Deing C-R<sup>60</sup>, E being nitrogen or N<sup>1</sup>-0′, F being C-R<sup>61</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group VI.. Claims 73-1 23 and 128-1 35, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being C-R<sup>6B</sup>, E being C-R<sup>6B</sup>, F being nitrogen or N<sup>+</sup>-O<sup>\*</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group VII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being nitrogen or N<sup>+</sup>0, **D** being C-R<sup>69</sup>, E being C-R<sup>69</sup>, E being C-R<sup>69</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group VIII. Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (x). A being nitrogen or N<sup>-</sup>07, B being C-R<sup>61</sup>, D being nitrogen or N<sup>-</sup>07, E being C-R<sup>61</sup>, F being C-R<sup>62</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group IX. Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (x), A being nitrogen or N¹-07, B being C-R<sup>69</sup>, D being C-R<sup>69</sup>, E being nitrogen or N¹-07, F being C-R<sup>69</sup>, classified in class 544, subclass various. If this group is

> elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group X. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (X). A being nitrogen or N'-0, B being C-R<sup>68</sup>, D being C-R<sup>69</sup>, E being C-R<sup>69</sup>, F being mitrogen or N'-0', classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XI. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being nitrogen or N<sup>-1</sup>O; D being nitrogen or N<sup>-1</sup>O; D being con or N<sup>-1</sup>O; E being C-R<sup>6E</sup>, F being C-R<sup>6E</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being nitrogen or N<sup>\*</sup>-0<sup>\*</sup>, D being C-R<sup>60</sup>, E being nitrogen or N<sup>\*</sup>-0<sup>\*</sup>, F being C-R<sup>64</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XIII. Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being nitrogen or N<sup>-1</sup>O, D being C-R<sup>6B</sup>, F being nitrogen or N<sup>-1</sup>O, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XIV. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being nitrogen or N<sup>+</sup>-0, E being nitrogen or N<sup>+</sup>-0, F being C-R<sup>6B</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XV. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being nitrogen or N<sup>+</sup>-0°, E being C-R<sup>6E</sup>, F being nitrogen or N<sup>+</sup>-0°, classified in class 544, subclass various. If this

group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group XVI. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being C-R<sup>6B</sup>, E being nitrogen or N<sup>+</sup>-0', F being nitrogen or N<sup>+</sup>-0', classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XVII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (z), G being O, J being C-R<sup>O</sup>, or C-[connection point to formula (I)], L being C-R<sup>O</sup>, or C-[connection point to formula (I)], M being C-R<sup>O</sup>, or C-[connection point to formula (I)], Q being C-R<sup>O</sup>, or C-[connection point to formula (I)], classified in class \$46, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XVIII. Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (z), G being S, J being C-R<sup>Q1</sup>, or C-[connection point to formula (1)], I being C-R<sup>Q2</sup>, or C-[connection point to formula (1)], M being C-R<sup>Q3</sup>, or C-[connection point to formula (1)], Q being C-R<sup>Q3</sup>, or C-[connection point to formula (1)], classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XIX. Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (z), G being N, J being C-R<sup>60</sup>, or C-[connection point to formula (1)], I being C-R<sup>61</sup>, or C-[connection point to formula (1)], M being C-R<sup>60</sup>, or C-[connection point to formula (1)], Q being C-R<sup>60</sup>, or C-[connection point to formula (1)], classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XX. Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (z), G being 0, J being C-R<sup>©</sup>, or C-[connection point to formula (1)], L being C-R<sup>©</sup>, or C-[connection point to formula (1)], M being C-R<sup>©</sup>, or C-[connection point to formula (1)], Q being C-R<sup>©</sup>, or C-[connection point to formula (1)], classified in class 546, subclass various. If this group is

> elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group XXI. (Incorrectly identified as XVII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (c), G being O, J being C-R<sup>61</sup>, L being C-R<sup>64</sup>, M being C-R<sup>64</sup>, Q being C-R<sup>64</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXII. (Incorrectly identified as XVIII) Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in subformula (2), G being O, J being C-R<sup>64</sup>, L being C-R<sup>65</sup>, W being C-R<sup>65</sup>, Classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required. [SAME AS GROUP XXI?]
- Group XXIII. (Incorrectly identified as XIX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being O, J being C-R<sup>61</sup>, M being C-R<sup>63</sup>, M being C-R<sup>63</sup>, Q being C-R<sup>64</sup>, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required. ISAME AS GROUP XXI?
- Group XXIV. (Incorrectly identified as XX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being O, J being nitrogen, L being C-R<sup>61</sup>, M being C-R<sup>60</sup>, Q being C-R<sup>63</sup>, elassified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXV. (Incorrectly identified as XXI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being O, J being C-R<sup>60</sup>, L being nitrogen, M being C-R<sup>60</sup>, Q being C-R<sup>60</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXVI. (Incorrectly identified as XXII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being O, J being C-R<sup>G1</sup>, L being C-R<sup>G1</sup>, M being nitrogen, Q being C-R<sup>G2</sup>, classified in class 546, subclass various. If

this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group XXVII. (Incorrectly identified as XXIII) Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in subformula (z), G being O, J being C-R<sup>6J</sup>, L being C-R<sup>6M</sup>, Q being nitrogen, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXVIII. (Incorrectly identified as XXIV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being S, J being nitrogen, L being C-R<sup>61</sup>, M being C-R<sup>64</sup>, Q being C-R<sup>64</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXIX. (Incorrectly identified as XXV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being S, J being C-R<sup>6J</sup>, L being nitrogen, M being C-R<sup>6M</sup>, Q being
- Group XXX. (Incorrectly identified as XXVI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being S, J being C-R<sup>64</sup>, L being C-R<sup>64</sup>, M being nitrogen, Q being C-R<sup>69</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXI. (Incorrectly identified as XXVII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being S, J being C-R<sup>GI</sup>, L being C-R<sup>GI</sup>, W being compound is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXII. (Incorrectly identified as XXVIII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being N, J being nitrogen, L being C-R<sup>61</sup>, M being C-R<sup>64</sup>. O being C-R<sup>64</sup> O being C-R<sup>65</sup> is the classified in class 546, subclass various. If this

group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group XXXIII. (Incorrectly identified as XXIX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being N, J being C-R<sup>63</sup>, L being nitrogen, M being C-R<sup>64</sup>, Q being C-R<sup>63</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXIV. (Incorrectly identified as XXX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being N, J being C-R<sup>61</sup>, L being C-R<sup>63</sup>, M being Nitrogen, Q being C-R<sup>62</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXV. (Incorrectly identified as XXXI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being N, J being C-R<sup>61</sup>, L being C-R<sup>6M</sup>, Q being Nitrogen, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXVI. (Incorrectly identified as XXXII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being C, J being Nitrogen, L being C-R<sup>61</sup>, M being C-R<sup>62</sup>, O being C-R<sup>63</sup>, Q being C-R<sup>63</sup>, easistified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXVII. (Incorrectly identified as XXXII) Claims 73-123 and 128-135, drawn to compound of formula (1), wherein Ar being formula (x) and in sub-formula (z), G being C, J being Nitrogen, L being C-R<sup>64</sup>, M being C-R<sup>64</sup>, Q being C-R<sup>65</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXVIII. (Incorrectly identified as XXXIII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (z), G being C, J being C-R<sup>6J</sup>. L Nitrogen, M being C-R<sup>6M</sup>. O being C-R<sup>6M</sup>.

group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group XXXIX. (Incorrectly identified as XXXIV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (z), G being C, J being C-R<sup>61</sup>, L being C-R<sup>61</sup>, M being Nitrogen, Q being C-R<sup>62</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXX. (Incorrectly identified as XXXV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in subformula (z), G being C, J being C-R<sup>61</sup>. L being C-R<sup>64</sup>. Q being Nitrogen, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXXI. (Incorrectly identified as XXXVI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (z), wherein G, J, L, M, Q, being other than groups XVII-XXXV, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXXXII. (Incorrectly identified as XXXV) Claims 124-127, and 136, drawn to composition and method for treating an inflammatory disease using the compounds of formal (I), classified in class 514, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.